



Real Time UT Wall Thickness Monitoring

SMS Ltd provides sand monitoring using best in class, field proven technology. After extensive testing of acoustic monitoring systems, we identified the instrumentation to give our clients the edge they require.

System Overview

The Real -Time UT Wall Thickness Monitoring System is a series of installed UT wall thickness sensors, which form a monitoring array. The system measures absolute wall thickness with no averaging or extrapolation, this allows early identification of corrosion/ erosion activity, areas of high-risk can be monitored continuously.



Features

Continuous monitoring

- Early identification of wall loss at high-risk areas

Flexible Array

- Up to 16 sensors per location allows greatest coverage of high risk areas

Data Alarming Integration

- Realtime data and alarming integration to end user acquisition or database

Non-intrusive

- Mounted externally via a banding strap

Zone 2

- For use in Zone 2 applications

Benefits

Increased safety

- No need for personnel to inspect high-risk areas

Reduced costs

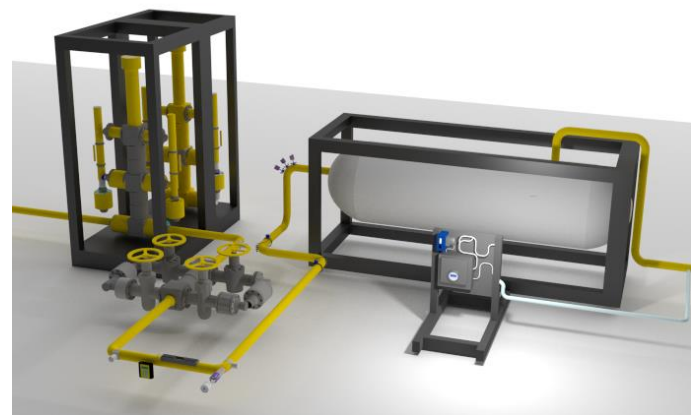
- No requirement for offshore manual operations

Real-Time Erosion / Corrosion Measurement

- Informs real-time decision making, risk assessment allowing increased reliability and safe operations

Remote Monitoring

- Save on manpower and offshore bed space



Sense



Understand



Perform

Aberdeen / Abu Dhabi / Kuala Lumpur

www.smsoilfield.com

info@smsoilfield.com

Specifications

Transmitter

Model no	-PIMS 100 Modbus
Protocol	Modbus
Communication	RS-485, 2-wire, max. 1000'
Power	10-20 VDC
Ultrasonic System;	
channels	16 ultrasonic, 1 temperature
pulser voltage	±5V bipolar square wave
receiver	1–10 MHz (-3dB)
gain	-10dB to +70dB
digitizer frequency	40 Msps
certification	Class 1, Div. 1, ATEX Zone 1 (coming 2Q16)
Enclosure	
type	instrumentation housing
material	aluminium
rating	Class 1, Div. 1, Group BCD, NEMA 4X, IP66
dimensions/weight	5" × 5¼" × 4¼" / 4 lbs.

Tablet Datalogger

Performance

processor	Intel i5-4200U 1.6GHz w/ 3MB L3 cache dual-core)
memory	8 GB RAM
storage	M2-SATA SSD, 64 GB
operating system	Windows 10
connections	network power, data via RS-485-to-USB adapter physical
drop/shock resistance.....	MIL-STD-810G
environmental.....	IP65, 14–131°F (-10 to +55 °C)
dimensions/weight.....	11.4" × 7.48" × 0.78" / 2.73 lbs

Transducer Cable

Type	armoured, ¾" dia.
Maximum length to transducer	standard 10' (3.0m), custom to 25' (7.6m)

Transducers

	single-element contact	delay-line contact	dual-element	angle-beam or shear-wave
<i>model</i>	XD-101	XD-201	XD-301	custom
<i>application</i>	general purpose	ultra-high temp	severe pitting	cracking
<i>frequency</i>	5 MHz	7 MHz	5 MHz	2.25-10 MHz
<i>active area (dia.)</i>	0.25"/6.35mm	0.375"/10mm	0.375"/10mm	custom
<i>overall (dia. x h)</i>	1.0 × 1.0" 25.4 × 25.4 mm	0.8 × 2.25" 20.3 × 57.2 mm	0.75 × 0.75" 19 × 19 mm	custom
<i>n.o. transducers</i>	1-16	1-16	1-8	2-8 (TT), 1-16 (PE)
<i>resolution</i>	0.001"/0.025mm	0.001"/0.025mm	0.001"/0.025mm	custom
<i>thickness range</i>	application-dependent	0.125-1.0" 3.0-25.0mm	0.040-6.0" 1.0-150.0mm	custom
<i>temp range</i>	application-dependent	-5 to +932 °F -20 to +500 °C	-5 to +300 °F -20 to +150 °C	custom
<i>attachment</i>	magnet/adhesive	mechanical clamp	magnet/adhesive	custom

TT = through-transmission, PE = pulse-echo